

Notice of Allowability

Application No.

10/624,342

Examiner

Irakli Kiknadze

Applicant(s)

CESMELI ET AL.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-68.
3. ☒ The drawings filed on 22 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

IK

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-68 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1-18 are allowed because prior art fails to teach or make obvious a method for selecting a projection data set, comprising: generating two or more comparison projection data sets from the projection data at the axial location; deriving a correlation error for each comparison projection data set relative to a reference projection data set using the at least one set of moments; and selecting a matching projection data set based upon the correlation error as claimed.

Claims 19-30 are allowed because prior art fails to teach or make obvious a computer program, provided on one or more computer readable media, for selecting a projection data set, comprising: a routine for generating two or more comparison projection data sets from the projection data at the axial location; a routine for deriving a correlation error for each comparison projection data set relative to a reference projection data set using the at least one set of moments; and a routine for selecting a matching projection data set based upon the correlation error as claimed.

Claims 31-42 are allowed because prior art fails to teach or make obvious a CT image analysis system comprising: a computer system configured to receive the set of projection data, to generate two or more comparison projection data sets from the projection data at the axial location, to derive a correlation error for each comparison

Art Unit: 2882

projection data set relative to a reference projection data set using the at least one set of moments, and to select a matching projection data set based upon the correlation errors as claimed.

Claims 43-45 are allowed because prior art fails to teach or make obvious a CT image analysis system comprising: means for generating two or more comparison projection data sets from the projection data at the axial location; means for deriving a correlation error for each comparison projection data set relative to a reference projection data set using the at least one set of moments; and means for selecting a matching projection data set based upon the correlation errors as claimed.

Claims 46-56 are allowed because prior art fails to teach or make obvious a method for generating a motion signal from a set of projections, comprising: calculating the 0th order moments for the set of projection data for each view position to form an aggregate motion signal; and separating the aggregate motion signal into a corruptive signal and a desired motion signal based on frequency characteristics as claimed.

Claims 57-60 are allowed because prior art fails to teach or make obvious a computer program, provided on one or more computer readable media, for generating a motion signal from a set of projections, comprising: a routine for calculating the 0th order moments for the set of projection data for each view position to form an aggregate motion signal; and a routine for separating the aggregate motion signal into a corruptive signal and a desired motion signal based on frequency characteristics as claimed.

Claims 61-66 are allowed because prior art fails to teach or make obvious a CT image analysis system, comprising a computer system configured to receive the set of

Art Unit: 2882

projection data, to calculate the 0th order moments for the set of projection data for each view position to form an aggregate motion signal and to separate the aggregate motion signal into a corruptive signal and a desired motion signal based on frequency characteristics as claimed.

Claims 67 and 68 are allowed because prior art fails to teach or make obvious a CT image analysis system, comprising: computer system configured to receive the set of projection data; means for forming an aggregate motion signal; and means for separating the aggregate motion signal into a corruptive signal and a desired motion signal based on frequency characteristics as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawai et al. (US Patent 5,640,436), Yavuz et al. (US Patent 6,539,074 B1), Arata (US Patent 5,552,605) and Hu (US Patent 5,561,695) teach methods and apparatus for selecting the projection data sets based on correlation.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00- 5:30.

Art Unit: 2882

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irakli Kiknadze
November 23, 2004

IK



DAVID V. BRUCE
PRIMARY EXAMINER